

IN THE ABSTRACT

Please amend the Abstract as follows. The amendments to the Abstract set forth in the Amendment filed on 2 September 2003 have been incorporated.

A cathode for an electron tube includes a metal base and an electron-emitting material layer coated on the metal base, ~~where the~~. The electron-emitting material layer contains a needle-shaped conductive material and the surface roughness ~~corresponding to a distance between the highest point and the lowest point on the surface~~ of the electron-emitting material layer is controlled to be under 10 microns. ~~[[A]]~~ The needle-shaped conductive material ~~is contained~~ in the electron-emitting material layer ~~to effectively form~~ forms a conductive path, thereby minimizing the generation of Joule heat due to self-heating of the electron-emitting material layer. ~~Also, grain~~ Grain and pore sizes of the electron-emitting material layer ~~are uniformly controlled~~ and the density and porosity of the electron-emitting material layer are ~~[[also]]~~ controlled, thereby improving the density and surface planarity of the cathode. ~~compared to the conventional cathode manufactured by a spraying method.~~ ~~Thus, during the operation of the cathode, shrinkage~~ Shrinkage of the cathode ~~can be is~~ prevented and uniformity in the distance between a cathode and a first grid ~~can be is~~ maintained, thereby improving a lifetime characteristic and exhibiting a stable emission characteristic. ~~Therefore, the electron tube cathode can remarkably improve a lifetime characteristic even for a high current density, which is needed for a larger and higher-definition cathode-ray tube.~~